

REMARKS

Claims 2-16 and 18-33 are pending in the present application. In the Office Action, the Examiner rejected claims 2, 5, 7, 9, 14-16, 18, 21, 23, 25, and 30-33 under 35 U.S.C. 102(e) as being anticipated by Freed, et al (U.S. Patent No. 6,691,068). The Examiner's rejections are respectfully traversed.

Freed is concerned with collecting data associated with conditions in a processing tool in a non-perturbing manner so that the data may be used in equipment response models. Thus, the sensor apparatus 100 described by Freed appears to be intended to be loaded in the processing tool in place of a workpiece and to have characteristics that are similar to the workpiece so as to minimize any disruptions in the conditions inside the processing tool. For example, Freed describes a sensor apparatus 100 that includes various devices formed on a substrate 110 that preferably has material properties similar to materials included in semiconductor wafer workpieces that may be processed in a processing tool. The substrate 110 described by Freed also has dimensions similar to those of the workpiece so as to mimic the behavior of the workpiece in the process tool, as well as being capable of being loaded and unloaded to and from the process tool using substantially the same robot used for the workpiece is so that disruptions to the manufacturing operation are minimized. See Freed, col. 5, l. 50 - col. 6, l. 36.

However, Freed fails to describe or suggest collecting workpiece state trace data for the workpiece during its processing in the process flow. Accordingly, Freed also fails to describe or suggest generating a quality profile of the workpiece based on the workpiece state trace data and periodically updating the workpiece state trace data and updating the associated quality profile as the workpiece progresses through the process flow. For at least the aforementioned reasons, Applicant respectfully submits that the present invention is not anticipated by Freed and requests

that the Examiner's rejections of claims 2, 5, 7, 9, 14-16, 18, 21, 23, 25, and 30-33 under 35 U.S.C. 102(e) be withdrawn.


Moreover, Applicants respectfully submit that the present invention is not obvious in view of Freed. As discussed above, Freed fails to describe or suggest many of the limitations of the present invention. Freed also fails to provide any suggestion or motivation to modify the prior art to arrive at Applicant's claimed invention. To the contrary, Freed appears to teach away from Applicant's claimed invention. In particular, Freed appears to teach away from collecting workpiece state trace data for the workpiece during its processing in the process flow by describing a sensor apparatus 100 that appears to be intended to be loaded in the processing tool in place of a workpiece. It is by now well established that teaching away by the prior art constitutes *prima facie* evidence that the claimed invention is not obvious. See, *inter alia*, *In re Fine*, 5 U.S.P.Q.2d (BNA) 1596, 1599 (Fed. Cir. 1988); *In re Nielson*, 2 U.S.P.Q.2d (BNA) 1525, 1528 (Fed. Cir. 1987); *In re Hedges*, 228 U.S.P.Q. (BNA) 685, 687 (Fed. Cir. 1986).

In the Office Action, the Examiner objected to claims 3, 4, 6, 8, 10-13, 19-20, 22, 24, and 26-29, but indicated that these claims contain allowable subject matter. In view of the above arguments, Applicant believes that these claims are allowable in their present form and requests that the Examiner's objections to claims 3, 4, 6, 8, 10-13, 19-20, 22, 24, and 26-29 be withdrawn.

In view of the remarks set forth herein, the application is believed to be in condition for allowance and notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the examiner is requested to contact the undersigned at (713) 934-4052 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

Date: 8/31/04


Mark W. Sinceff, Ph.D.
Reg. No. 52,226
10333 Richmond Dr., Suite 1100
Houston, Texas 77042
(713) 934-7000
(713) 934-7011 (facsimile)

AGENT FOR APPLICANT

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☒ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.